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Subject: Final Initial Data Gap Analysis for Soil, Former Stimson Lumber Site,

Operable Unit 5

Dear Mr. Peronard, Ms. Hernandez, and Mr. Raney,

The purpose of this letter is to identify initial gaps in soil sampling locations that are currently known to exist for the Former Stimson Lumber Site, Operable Unit (OU) 5. The samples identified for collection in this letter will help support the risk assessment and remedial investigation (RI) specific to OU5. The initial soil data gaps were determined by reviewing all existing data for the site as presented in the Draft Data Summary Report (DSR) dated May 2007. It is expected that additional soil sampling may be required in as the DSR and the conceptual site model (CSM) for this site are

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finalized. Additional soil sampling efforts will be identified in a future data gap analysis that will address all media types requiring additional sample collection. It is further anticipated that a separate sampling event focused toward on-site buildings will be conducted if required. A data gap analysis, specific to all site buildings, will be performed prior to planning any building-focused sampling event.

This analysis is organized to identify data gaps by areas:

- Libby Groundwater Superfund Site
- Former Nursery Area Waste Bark Piles
- Banks of Libby Creek
- Storm Water Containment and Waste Water Lagoon Area
- Wood Chip Piles
- Known Areas of LA Containing Soils and/or Dust
  - o Former Nursery Shed Area
  - Former Nursery Past Activity-Based Sampling Area
  - o Former Guard Station Near Libby Creek
  - o Diesel Pump House
  - o Soil Sample Location CS-09294

All soil collection activities will be conducted in accordance with the most recent version of CDM-LIBBY-05 and estimates of visual vermiculite will be performed according to the most recent version of CDM-LIBBY-06.

## Libby Groundwater Superfund Site

Past soil sampling activities were not conducted inside the boundary of the Libby Groundwater Superfund Site. To complete characterization of this area, it is recommended that soil sampling and evaluation for the presence of visible vermiculite within the boundary of the Libby Groundwater Superfund Site be conducted. For initial sample collection efforts, it is recommended that 30-point composite surface soil samples be collected from a 100 feet by 100 feet grid system in all areas except land treatment unit 1, land treatment unit 2, and the expanded landfarm. Using the 100 by 100 feet grid will result in the collection of approximately 140 surface soil samples in this area. Additional soil sampling efforts should be considered to collect subsurface samples from native soils found 18 to 24-inches below the existing surface in land treatment unit 1, land treatment unit 2, and the expanded landfarm. The soil layer undergoing treatment will be removed down to the native soil surface when remediation is determined to be completed.

# Former Nursery Area Waste Bark Piles

To determine the removal options and potential future use of the waste bark debris piles, the material in the piles should be sampled and analyzed for a presence/absence of LA using the most recent version of ISSI-LIBBY-02, *Reflectance Spectroscopy Screening for Asbestos in Soils* (United States Geological Survey [USGS] 2002).

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Test pits should be excavated from the surface to soil surface or a depth of 8 to 10 feet, whichever is encountered first, depending on the depth the excavator can safely reach. Test pits should be excavated on an approximate grid system with one pit excavated for every 10,000 square feet (100 feet x 100 feet grid system), resulting in approximately 10 test pits.

As part of this activity, personal air samples should be collected from the excavator operator and the operator of the portable IR equipment. These samples should be collected in accordance with the *Final SAP for Activity-Based Outdoor Air Exposures, Operable Unit 4, Libby, Montana, Superfund Site* (SRC and CDM 2007) and all approved modifications.

Once the waste bark debris piles are removed, soil sampling and visual vermiculite evaluation should be conducted in the areas that are currently under the piles. One 30-point composite surface soil sample should be collected from each 100 feet by 100 feet grid covering the 93,000 square feet currently occupied by the waste bark debris piles.

### **Banks of Libby Creek**

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The portion of Libby Creek that flows along the eastern boundary of the site should be visually assessed for the presence of vermiculite and other mine related materials as part of the Libby area creek investigation effort. In addition, it is recommended that one 30-point composite surface sample be collected from each side of the bank for every 400 linear feet. The sample should be collected from halfway between the top of the bank and the water level at the time of sample collection.

## Storm Water Containment and Waste Water Lagoon Area

The previously unsampled area is bounded by rail lines on to the west and north, Libby Creek to the east and Fifth Street Extension to the South. Investigations in this area should include soil sampling and an evaluation for the presence of visible vermiculite on a 100 foot by 100 foot sampling grid.

# **Wood Chip Piles**

Several wood bark piles are currently present in two areas to the south and east of the former power house, are currently being distributed to local residents for use as landscaping material. Using the USGS portable x-ray diffraction (XRD) method the presence/absence of LA in the wood chip piles will be determined.

Similar to the sampling planned for the waste bark piles in the former nursery area, test pits should be excavated from the surface to a depth of 8 to 10 feet depending on the depth the excavator can safely reach. One test pit should be excavated on a grid system with one pit excavated for every 10,000 square feet (100 feet x 100 feet grid system).

As part of this activity, personal air samples should be collected from the excavator operator and the operator of the portable IR equipment. These samples should be collected in accordance with the *Final SAP for Activity-Based Outdoor Air Exposures*,

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Operable Unit 4, Libby, Montana, Superfund Site (SRC and CDM 2007) and all approved modifications.

### Known Areas of LA Containing Soil and/or Dust

Fiver areas containing LA have been observed based on previous sampling efforts that should be re-sampled according to current site-protocols CDM-LIBBY-05 and CDM-LIBBY-06. The use of the current protocols will result in better delineation of these areas than was possible using past techniques.

#### Former Nursery Shed Area

Soil samples collected near and dust samples collected in the former nursery shed have shown high levels of detectable LA in previous sampling events. Therefore, additional soil sampling and a visual vermiculite evaluation should be conducted in this area. It is recommended that 30-point composite surface soil samples and visual estimation be performed on a grid system of 100 feet by 100 feet in this area.

### Former Nursery Past Activity-Based Sampling Area

The second area is located near the center of the former nursery area and is situated around the previous sampling locations CS-09595, CS-09672, SQ-00067, and SQ-00066. LA results for all these samples indicate trace levels of LA. It is recommended that one 30-point composite surface soil sample be collected from each 100 feet by 100 feet grid centered around this area. Visual estimation for the presence of vermiculite should also be performed in this area.

### Former Guard Station near Libby Creek Bridge

Past dust sampling of the former guard station near the Libby Creek Bridge at the former North Gate, indicated LA was present at concentrations of 44,116 structures per square centimeter. This sample result is based on a detection of one structure of LA; the elevated analytical result is due to a high analytical sensitivity for this sample, which is equal to the sample result. The guard station has been demolished since sample collection. To determine if LA is present in soils near the location of the former guard station, one 30-point composite surface soil sample should be collected from a 100 by 100 foot grid around the location of the former guard station. Visual estimation for the presence of vermiculite should also be performed in this area.

#### Diesel Pump House

The fourth area is located near the diesel pump house. Dust samples previously collected in this building indicated LA was present at a concentration of 8,832 structures per square centimeter. To determine if LA is present in soils near the pump house, one 30-point composite surface soil sample should be collected from a 100 by 100 foot grid centered on the location of pump house. Visual estimation for the presence of vermiculite should also be performed in this area.

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#### Soil Sample Location CS-09294

The location of soil sample CS-09294 is in the vicinity of the area currently used by the Luck E G Post & Rail Company. It is recommended that one 30-point composite surface soil samples should be collected from a 100 by 100 foot grid around the location of this former soil sample location to further evaluate and delineate LA presence in soils in this area. Visual estimation for the presence of vermiculite should also be performed in this area.

If you have any questions or concerns, please feel free to contact me at (720) 264-1121.

Very truly yours,

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Dee Warren

**CDM Federal Programs Corporation** 

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Cc: Courtney Zamora, Volpe Center Site Manager Anni Autio, CDM Processing Area Task Order Manager Jeff Montera, CDM Project Manager